



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 60**

**[EPA-HQ-OAR-2013-0696; FRL-9944-26-OAR]**

**RIN 2060-AS86**

**Technical Amendments to Performance Specification 18 and  
Procedure 6**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Direct final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is taking direct final action to make several minor technical amendments to the performance specifications and test procedures for hydrogen chloride (HCl) continuous emission monitoring systems (CEMS). This direct final rule also makes several minor amendments to the quality assurance (QA) procedures for HCl CEMS used for compliance determination at stationary sources. The performance specification (Performance Specification 18) and the QA procedures (Procedure 6) were published in the Federal Register on July 7, 2015. These amendments make several minor corrections and clarify several aspects of these regulations.

**DATES:** This rule is effective on [Insert date 90 days from date of publication in the Federal Register] without further notice, unless the EPA receives adverse comment by [Insert date 45 days

from date of publication in the Federal Register]. If the EPA receives adverse comment, we will publish a timely withdrawal in the Federal Register informing the public that the rule will not take effect.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2013-0696, at <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov*. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the Web, Cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** Ms. Candace Sorrell, U.S. EPA, Office of Air Quality Planning and Standards, Air Quality

Assessment Division, Measurement Technology Group (Mail Code: E143-02), Research Triangle Park, NC 27711; telephone number: (919) 541-1064; fax number: (919) 541-0516; email address: *sorrell.candace@epa.gov*.

**SUPPLEMENTARY INFORMATION:**

The information presented in this rule is organized as follows:

- I. General Information
  - A. Why is the EPA using a direct final rule?
  - B. Does this action apply to me?
  - C. What should I consider as I prepare my comments for the EPA?
  - D. Where can I obtain a copy of this document?
  - E. Judicial Review
- II. This Action
- III. Statutory and Executive Order Reviews
  - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review
  - B. Paperwork Reduction Act (PRA)
  - C. Regulatory Flexibility Act (RFA)
  - D. Unfunded Mandates Reform Act (UMRA)
  - E. Executive Order 13132: Federalism
  - F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
  - G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
  - H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use
  - I. National Technology Transfer and Advancement Act
  - J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
  - K. Congressional Review Act (CRA)

**I. General Information**

- A. Why is the EPA using a direct final rule?

The EPA is publishing this direct final rule without a prior proposed rule because we view this as a non-controversial action and anticipate no adverse comment. This action makes minor technical amendments to Performance Specification 18 (PS 18) and Procedure 6. However, in the "Proposed Rules" section of this Federal Register, we are publishing a separate document that will serve as the proposed rule to announce the EPA's intent to amend PS 18 and Procedure 6, if adverse comments are received on this direct final rule by [Insert date 45 days from date of publication in the Federal Register]. We will not institute a second comment period on this action. Any parties interested in commenting must do so at this time. For further information about commenting on this rule, see the ADDRESSES section of this document. If the EPA receives adverse comment, the EPA will publish a timely withdrawal in the Federal Register informing the public that the rule will not take effect. The EPA will address all public comments in a subsequent final rule based on the proposed rule. Please note that if the EPA receives adverse comment on an amendment, paragraph, or section of this rule and if that provision may be severed from the remainder of the rule, the EPA may adopt as final those provisions of the rule that are not the subject of an adverse comment.

B. Does this action apply to me?

The major entities that would potentially be affected by the final PS 18 and the QA requirements of Procedure 6 for gaseous HCl CEMS are those entities that are required to install a new HCl CEMS, relocate an existing HCl CEMS, or replace an existing HCl CEMS under any applicable subpart of 40 Code of Federal Regulations (CFR) part 60, 61, or 63. Table 1 of this preamble lists the current federal rules by subpart and the corresponding source categories to which the PS 18 and Procedure 6 potentially would apply.

**TABLE 1. SOURCE CATEGORIES THAT WOULD POTENTIALLY BE SUBJECT TO PS 18 AND PROCEDURE 6**

| <b>Subpart(s)</b>     | <b>Source Category</b>  |
|-----------------------|---|
| <b>40 CFR part 63</b> |   |
| Subpart LLL           | Portland Cement Manufacturing Industry                                |
| Subpart UUUUU         | Coal- and Oil-fired Electric Utility Steam Generating Units           |
| Subpart DDDDD         | Industrial, Commercial, and Institutional Boilers and Process Heaters |

The requirements of PS 18 and Procedure 6 may also apply to stationary sources located in a state, district, reservation, or territory that adopts PS 18 or Procedure 6 in its implementation plan.

Table 2 lists the corresponding North American Industry Classification System (NAICS) codes for the source categories listed in Table 1 of this preamble.

**TABLE 2. NAICS FOR POTENTIALLY REGULATED ENTITIES**

| <b>Industry</b>   | <b>NAICS Codes</b>  |
|---|---------------------|
| Fossil Fuel-Fired Electric Utility<br>Steam Generating Units                | 327310              |
|   | 921150 <sup>a</sup> |
| Portland Cement Manufacturing Plants  | 327310              |
| Industrial, Commercial, and<br>Institutional Boilers and Process<br>Heaters | 211                 |
|   | 321                 |
|   | 322                 |
|   | 325                 |
|   | 324                 |
|   | 316, 326, 339       |
|   | 331                 |
|   | 332                 |
|   | 336                 |
|   | 221                 |
|   | 622                 |
|   | 611                 |

<sup>a</sup> Industry in Indian Country

Tables 1 and 2 are not intended to be exhaustive, but rather they provide a guide for readers regarding entities potentially affected by this action. If you have any questions regarding the potential applicability of PS 18 and test procedures (Procedure 6) to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

C. What should I consider as I prepare my comments for the EPA?

a. Submitting CBI. Do not submit this information to the EPA through <https://www.regulations.gov> or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to the EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific

information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

b. Tips for Preparing Your Comments. When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).
- Follow directions. The agency may ask you to respond to specific questions or organize comments by referencing a CFR part or section number.
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.

- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

- Make sure to submit your comments by the comment period deadline identified.

D. Where can I obtain a copy of this action?

In addition to being available in the docket, an electronic copy of this rule will also be available on the Worldwide Web (WWW) through the Technology Transfer Network (TTN) website. Following publication, the EPA will post the Federal Register version of the promulgation and key technical documents at <http://www3.epa.gov/ttn/emc/propperf.html>.

E. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this action must be filed in the United States Court of Appeals for the D.C. Circuit by [Insert date 60 days from date of publication in the Federal Register]. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. Parties with objections to this direct final rule are encouraged to file a comment in response to the parallel notice of proposed rulemaking for this action published in the proposed rules



section of this Federal Register, rather than file an immediate petition for judicial review of this direct final rule, so that the EPA can withdraw this direct final rule and address the comment in the proposed rulemaking. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

## **II. This Action**

On July 7, 2015, the EPA promulgated PS 18, that includes requirements for the initial acceptance of CEMS to measure HCl emissions (80 FR 38628). In that same action, we promulgated Procedure 6 specifying the minimum QA requirements necessary for control and assessment of the quality of CEMS data submitted to the EPA. Performance Specification 18 is applicable to the evaluation of HCl continuous monitoring instruments for Portland cement facilities, electric generating units, and industrial, commercial, and institutional boilers and process heaters. After publication of PS 18 and Procedure 6, we identified minor definition inconsistencies and unintended differences between the proposal and the final rule. In this action, we are making corrections to PS 18 and Procedure 6 as noted below to eliminate such inconsistencies and to remove unintended changes that occurred between the notice of proposed rulemaking and the final rulemaking.

This action:

- (1) Adds definitions for beam attenuation and beam intensity to clarify the meaning of these terms (Section 3.0);
- (2) Clarifies which detection limits must be less than 20 percent of the applicable emission limit (Section 11.5.6.5);
- (3) Revises the requirements to determine zero gas calibration drift measurements by allowing either exclusion or inclusion of the measurement optical path (Section 11.8.6.2);
- (4) Revises definitions for terms  $C_i$ , and  $S$ , to make them consistent with other performance specifications (Section 12.1);
- (5) Corrects equation 2 in PS 18 to include the average measured concentration of HCl used to calculate CEMS interference. This change clarifies that single or multiple interferent gases are allowed to be evaluated in PS 18 (Section 12.2);
- (6) Revises equation 7 in PS 18 to include an additional term that allows correction for the measured native background HCl concentration. This revision permits calculations for either option in revised section 11.8.6.2 (Section 12.4.4);

- (7) Corrects appendix A, equation 3 in PS 18 for calculating dilution factors when dynamic spike quality control measurements are made (PS 18 appendix A, Section 11.2.3);
- (8) Clarifies, in Procedure 6, that QA for data above span is subject to the specific requirements in applicable rules or permits, that supersede the general requirements in Procedure 6 (Section 4.1.5 and 4.1.5.3);
- (9) Resolves, in Procedure 6, prior confusion between greater than two clock hours and greater than two consecutive 1-hour averages in the measurement period for exceedance of span before additional CEMS responses checks are required (Section 4.1.5.1);
- (10) Clarifies the units of measure (percent) required for Integrated Path CEMS beam intensity check (Section 4.2.1); and
- (11) Corrects the incomplete reference to the equations required to calculate dynamic spiking error (DSE) (Section 5.2.4.2).

### **III. Statutory and Executive Order Reviews**

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and, therefore, was not submitted to the Office of Management and Budget (OMB) for review.

B. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA. These changes do not add information collection requirements beyond those currently required under the applicable regulations.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. This action makes minor technical correction and adds clarification in PS 18 and Procedure 6 and does not impose additional regulatory requirements on sources.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531-1538, and does not significantly or uniquely affect small governments. This action imposes no enforceable duty on any state, local or tribal governments, or the private sector.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the

relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175. This action adds additional language that clarifies several aspects for the performance standard and procedure and corrects some minor technical errors, but does not change the requirements for conducting the test method. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2-202 of the Executive Order. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk.

H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

This rulemaking does not involve technical standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations. This action does not relax the control measures on sources regulated by the rule and, therefore, will not cause emissions increases from these sources.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will

be effective [insert date 90 days from date of publication in  
the Federal Register].

**List of Subjects in 40 CFR Part 60**

Environmental protection, Administrative practice and procedure, Air pollution control, Continuous emission monitoring systems, Hydrogen chloride, Performance specifications, Test methods and procedures.

Dated: May 2, 2016.

Gina McCarthy,  
Administrator.

For the reasons stated in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

**PART 60 -- STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES**



1. The authority citation for part 60 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq.*

2. In appendix B to part 60, Performance Specification 18:

- a. Revise Sections 3.1 through 3.23, 11.5.6.5, 11.8.6.2, 12.1, 12.2 and 12.4.4;
- b. Add Sections 3.24, 3.25, and 12.2.1; and
- c. Revise Section 11.2.3 in appendix A of Performance Specification 18.

The revisions and additions read as follows:

**Appendix B to Part 60 - Performance Specifications**

\* \* \* \* \*

**PERFORMANCE SPECIFICATION 18-PERFORMANCE SPECIFICATIONS AND  
TEST PROCEDURES FOR GASEOUS HYDROGEN CHLORIDE (HCl) CONTINUOUS  
EMISSION MONITORING SYSTEMS AT STATIONARY SOURCES**

\* \* \* \* \*

3.0 Definitions

3.1 Beam attenuation is the reduction in electromagnetic radiation (light) throughput from the maximum beam intensity experienced during site specific CEMS operation.

3.2 Beam intensity is the electromagnetic radiation (light) throughput for an IP-CEMS instrument measured following manufacturers specifications.

3.3 Calibration cell means a gas containment cell used with cross stack or integrated path (IP) CEMS for calibration and to perform many of the test procedures required by this performance specification. The cell may be a removable sealed cell or an evacuated and/or purged cell capable of exchanging reference and other calibration gases as well as zero gas standards. When charged, it contains a known concentration of HCl and/or interference gases. The calibration cell is filled with zero gas or removed from the optical path during stack gas measurement.

3.4 Calibration drift (CD) means the absolute value of the difference between the CEMS output response and an upscale reference gas or a zero-level gas, expressed as a percentage of the span value, when the CEMS is challenged after a stated period of operation during which no unscheduled adjustments, maintenance or repairs took place.

3.5 Centroidal area means a central area that is geometrically similar to the stack or duct cross section and is no greater than 10 percent of the stack or duct cross-sectional area.

3.6 Continuous Emission Monitoring System (CEMS) means the total equipment required to measure the pollutant concentration or emission rate continuously. The system generally consists of the following three major subsystems:

3.6.1 Sample interface means that portion of the CEMS used for one or more of the following: sample acquisition, sample transport, sample conditioning, defining the optical measurement path, and protection of the monitor from the effects of the stack effluent.

3.6.2 HCl analyzer means that portion of the HCl CEMS that measures the total vapor phase HCl concentration and generates a proportional output.

3.6.3 Data recorder means that portion of the CEMS that provides a permanent electronic record of the analyzer output. The data recorder may record other pertinent data such as effluent flow rates, various instrument temperatures or abnormal CEMS operation. The data recorder may also include automatic data reduction capabilities and CEMS control capabilities.

3.7 Diluent gas means a major gaseous constituent in a gaseous pollutant mixture. For combustion sources, either carbon dioxide (CO<sub>2</sub>) or oxygen (O<sub>2</sub>) or a combination of these two gases are the major gaseous diluents of interest.

3.8 Dynamic spiking (DS) means the procedure where a known concentration of HCl gas is injected into the probe sample gas stream for extractive CEMS at a known flow rate to assess the performance of the measurement system in the presence of potential interference from the flue gas sample matrix.

3.9 Independent measurement(s) means the series of CEMS data values taken during sample gas analysis separated by two times the procedure specific response time (RT) of the CEMS.

3.10 Integrated path CEMS (IP-CEMS) means an in-situ CEMS that measures the gas concentration along an optical path in the stack or duct cross section.

3.11 Interference means a compound or material in the sample matrix other than HCl whose characteristics may bias the CEMS measurement (positively or negatively). The interference may not prevent the sample measurement, but could increase the analytical uncertainty in the measured HCl concentration through reaction with HCl or by changing the electronic signal generated during HCl measurement.

3.12 Interference test means the test to detect CEMS responses to interferences that are not adequately accounted for in the calibration procedure and may cause measurement bias.

3.13 Level of detection (LOD) means the lowest level of pollutant that the CEMS can detect in the presence of the source gas matrix interferences with 99 percent confidence.

3.14 Liquid evaporative standard means a reference gas produced by vaporizing National Institute of Standards and Technology (NIST) traceable liquid standards of known HCl concentration and quantitatively diluting the resultant vapor with a carrier gas.

3.15 Measurement error (ME) is the mean difference between the concentration measured by the CEMS and the known concentration of a reference gas standard, divided by the span, when the entire CEMS, including the sampling interface, is challenged.

3.16 Optical path means the route light travels from the light source to the receiver used to make sample measurements.

3.17 Path length means, for an extractive optical CEMS, the distance in meters of the optical path within a gas measurement cell. For an IP-CEMS, path length means the distance in meters of the optical path that passes through the source gas in the stack or duct.

3.18 Point CEMS means a CEMS that measures the source gas concentration, either at a single point at the sampling probe tip or over a path length for IP-CEMS less than 10 percent of the equivalent diameter of the stack or duct cross section.

3.19 Stack pressure measurement device means a NIST-traceable gauge or monitor that measures absolute pressure and conforms to the design requirements of ASME B40.100-2010, "Pressure Gauges and Gauge Attachments" (incorporated by reference - see §60.17).

3.20 Reference gas standard means a NIST-traceable gas standard containing a known concentration of HCl certified in

accordance with an EPA traceability protocol in section 7.1 of this PS.

3.21 Relative accuracy (RA) means the absolute mean difference between the gas concentration or the emission rate determined by the CEMS and the value determined by the RM, plus the confidence coefficient of a series of nine test runs, divided by the average of the RM or the applicable emission standard.

3.22 Response time (RT) means the time it takes for the measurement system, while operating normally at its target sample flow rate, dilution ratio, or data collection rate to respond to a known step change in gas concentration, either from a low- or zero-level to a high-level gas concentration or from a high-level to a low or zero-level gas concentration, and to read 95 percent of the change to the stable instrument response. There may be several RTs for an instrument related to different functions or procedures (e.g., DS, LOD, and ME).

3.23 Span value means an HCl concentration approximately equal to two times the concentration equivalent to the emission standard unless otherwise specified in the applicable regulation, permit or other requirement. Unless otherwise specified, the span may be rounded up to the nearest multiple of 5.

3.24 Standard addition means the addition of known amounts of HCl gas (either statically or dynamically) to the actual measurement path or measured sample gas stream.

3.25 Zero gas means a gas or liquid with an HCl concentration that is below the LOD of the measurement system.

\* \* \* \* \*

## 11.0 Performance Specification Test Procedure

\* \* \* \* \*

11.5.6.5 If your system LOD field verification does not demonstrate a SAR greater than or equal to your initial controlled environment LOD, you must increase the SA concentration incrementally and repeat the field verification procedure until the SAR is equal to or greater than LOD. The site-specific standard addition detection level (SADL) is equal to the standard addition needed to achieve the acceptable SAR, and SADL replaces the controlled environment LOD. For extractive CEMS, the SADL is calculated as the ESA using Equation A7 in appendix A of this PS. For IP-CEMS, the SADL is the SA calculated using Equation A8 in appendix A of this PS. As described in section 13.1 of this PS, the LOD or the SADL that replaces an LOD must be less than 20 percent of the applicable emission limit.

\* \* \* \* \*

11.8.6.2 For IP-CEMS, you must include the source measurement optical path while performing the upscale CD measurement; you may exclude the source measurement optical path when determining the zero gas concentration. Calculate the CD for IP CEMS using equations 4, 5, 6B, and 7 in section 12.4.

\* \* \* \* \*

## 12.0 Calculations and Data Analysis

### 12.1 Nomenclature

$C_i$  = Zero or HCl reference gas concentration used for test  $i$  (ppmv);

$C_{i,eff}$  = Equivalent concentration of the reference gas value,  $C_i$ , at the specified conditions (ppmv);

CC = Confidence coefficient (ppmv);

$CD_{extractive}$  = Calibration drift for extractive CEMS (percent);

$CD_{IP}$  = Calibration drift for IP-CEMS (percent);

$CD_0$  = Calibration drift at zero HCl concentrations for an IP-CEMS (percent);

$d_{avg}$  = Mean difference between CEMS response and the reference gas (ppmv);

$d_i$  = Difference of CEMS response and the RM value (ppmv);

I = Total interference from major matrix stack gases, (percent);

LSF = Line strength factor for IP-CEMS instrument specific correction for temperature and gas matrix effects



derived from the HITRAN and/or manufacturer specific database (unitless);

$\Delta MC_{avg}$  = Average of the 3 absolute values of the difference between the measured HCl calibration gas concentrations with and without interference from selected stack gases (ppmv);

$MC_i$  = Measured HCl reference gas concentration i (ppmv);

$\overline{MC_i}$  = Average of the measured HCl reference gas concentration i (ppmv);

$MC_{int}$  = Measured HCl concentration of the HCl reference gas plus the individual or combined interference gases (ppmv);

$ME_{extractive}$  = Measurement error for extractive CEMS (percent);

$ME_{IP}$  = Measurement error for IP-CEMS (percent);

$MN_{avg}$  = Average concentration at all sampling points (ppmv);

$MN_{bi}$  = Measured native concentration bracketing each calibration check measurement (ppmv);

$MN_i$  = Measured native concentration for test or run i (ppmv);

n = Number of measurements in an average value;

$P_{stack}$  = Absolute stack pressure (mm Hg)

$P_{reference}$  = Absolute pressure of the calibration cell for IP-CEMS (mm Hg)

$PL_{cell}$  = Path length of IP-CEMS calibration cell (m);

$PL_{stack}$  = Path length of IP-CEMS stack optical path (m);  
 $RA$  = Relative accuracy of CEMS compared to a RM  
 (percent);  
 $RM_i$  = RM concentration for test run i (ppmv);  
 $RM_{avg}$  = Mean measured RM value (ppmv);  
 $S$  = Span value (ppmv);  
 $S_d$  = Standard deviation of the differences (ppmv);  
 $S_{ti}$  = Stratification at traverse point i (percent);  
 $SADL$  = Standard addition detection level (ppmv);  
 $t_{0.975}$  = One-sided t-value at the 97.5<sup>th</sup> percentile obtained  
 from Table 5 in section 17.0 for n-1 measurements;  
 $T_{reference}$  = Temperature of the calibration cell for IP-CEMS  
 (degrees Kelvin);  
 $T_{stack}$  = Temperature of the stack at the monitoring location  
 for IP-CEM (degrees Kelvin).

12.2 Calculate the difference between the measured HCl  
 concentration with and without interferences for each  
 interference gas (or mixture) for your CEMS as:

$$\Delta MC_{avg} = \frac{\sum_{i=1}^3 |MC_i - MC_{int}|}{3} \quad \text{Eq. 1}$$

Calculate the total percent interference as:

$$I = \sum_{i=1}^n \frac{\Delta MC_{avg}}{MC_i} * 100 \quad \text{Eq. 2}$$

12.2.1 Calculate the equivalent concentration  $C_{i,eff}$  using  
 Equation 4:

$$C_{i,eff} = \left[ C_i \times \frac{PL_{cell}}{PL_{stack}} \times \frac{T_{stack}}{T_{reference}} \times \frac{P_{preference}}{P_{stack}} LSF \right] \quad \text{Eq. 4}$$

\* \* \* \* \*

12.4.4 Calculate the zero CD as a percent of span for an IP-CEMS as:

$$CD_0 = \frac{(|(MC_i - MN_b) - (MC_{i+1} - MN_b)|)}{s} * 100 \quad \text{Eq. 7}$$

\* \* \* \* \*

#### PS-18 Appendix A Standard Addition Procedures

\* \* \* \* \*

#### 11.0 Calculations and Data Analysis. \* \* \*

\* \* \* \* \*

11.2.3 If you determine your spike dilution factor using an independent stable tracer that is present in the native source emissions, calculate the dilution factor for dynamic spiking using equation A3:

$$DF = \frac{M_{spiked\ tracer} - M_{native\ tracer}}{C_{tracer\ spiked} - M_{native\ tracer}} \quad \text{Eq. A3}$$

\* \* \* \* \*

3. In appendix F to part 60, revise Sections 4.1.5, 4.1.5.1, 4.1.5.3, and 5.2.4.2 in Procedure 6 to read as follows:

#### **Appendix F to Part 60 - Quality Assurance Procedures**

\* \* \* \* \*

Procedure 6. Quality Assurance Requirements for Gaseous  
Hydrogen Chloride (HCl) Continuous Emission Monitoring Systems  
Used for Compliance Determination at Stationary Sources

\* \* \* \* \*

4.0 Daily Data Quality Requirements and Measurement  
Standardization Procedures

\* \* \* \* \*

4.1.5 Additional Quality Assurance for Data above Span.  
Unless otherwise specified in an applicable rule or permit, this  
procedure must be used to assure data quality and may be used  
when significant data above span is being collected.

4.1.5.1 Any time the average measured concentration of HCl  
exceeds 150 percent of the span value for two consecutive 1-hour  
averages, conduct the following 'above span' CEMS response  
check.

\* \* \* \* \*

4.1.5.3 Unless otherwise specified in an applicable rule or  
permit, if the 'above span' response check is conducted during  
the period when measured emissions are above span and there is a  
failure to collect at least one data point in an hour due to the  
response check duration, then determine the emissions average  
for that missed hour as the average of hourly averages for the

hour preceding the missed hour and the hour following the missed hour

\* \* \* \* \*

## 5.0 Data Accuracy Assessment

\* \* \* \* \*

5.2.4.2 Calculate results as described in section 6.4. To determine CEMS accuracy you must calculate the dynamic spiking error (DSE) for each of the two upscale audit gases using equation A5 in appendix A to PS-18 and Equation 6-3 in section 6.4 of Procedure 6 in appendix B to this part.

\* \* \* \* \*

[FR Doc. 2016-10989 Filed: 5/18/2016 8:45 am; Publication Date: 5/19/2016]